North American Drought Monitor – September 2004

CANADA: Northern Boreal regions in western Canada continued to experience drier than average conditions or did not receive sufficient precipitation to improve the overall drought status. Data is very sparse for the northern Territories including the Yukon, Northwest Territories and Nunavut, and drought definitions are not established; but, precipitation amounts are reported to be below 70 percent of average for the past 12 months and near 50 percent of average for the past five months. In British Colimbia, abundant growing season rainfall provided ample moisture and greatly reduced the water supply constraints caused by low snowpack accumulations and runoff this year. Groundwater levels in the south central regions of the province remain below average and a D0 (abnormally dry) designation has been noted on the map. Most areas of Alberta, except the far north, recorded normal to above-normal precipitation this year. In the Milk River basin of southern Alberta total runoff volumes for the March-September period remained much below average as most of the precipitation went into the soil. In the southern Oldman River basin March-June volumes ranked near the 15th lowest on record (except for the Belly River which ranked 26th lowest), despite near normal precipitation through the summer. Due to the generally improved crop growing conditions, provincial average yields for most crops in 2004 are expected to be higher than last year and the 10-year averages. Drought affected areas include Cardston County in the south, east central Alberta; the High level region and the most northerly Boreal and Taiga regions of the province. Soil moisture conditions are currently very dry in most areas of Alberta's agricultural region. Due to a generally moist growing season, Sasktachewan crop production is estimated to be above the previous ten year average. Water supplies are generally adequate. In much of the northern quarter of Saskatchewan precipitation and streamflow volumes have been well below average. In the northeast region streamflow in Douglas River is below the lower quartile. In northerrn Manitoba, lakes in the vicinity of The Pas are at suitable levels but those on the Grass River system from Flin Flon northeast remain very low. The levels of Lake St. Martin and Lake Pineimuta remain well below average, still reflecting the drought of the past few years.

In Ontario, most of the hydrometric stations reported flows below the monthly mean, but above the monthly minimum. Only the Ganaraska River Above Dale, the Mississippi River at Appleton, the Mississippi River at Fergusons Falls and Millhaven Creek near Millhaven reported flows above the monthly mean. For the month of September the Sturgeon River fell below the monthly mean. The Missinaibi River remained above the monthly mean during September. Flows on the English River fell below the monthly mean for the month of September. Growing season precipitation was average in most regions of Quebec. No drought related isues are reported. Heavy rains from tropical storms helped push monthly precipitation totals above normal in northern areas of New Brunswick. In most areas of New Brunswick water supplies are good and no problems are anticipated. Surface water availability is low in central areas of New Brunswick and groundwater levels are low in the northeast. While the growing season total for precipitation in Atlantic Canada was below average there were no adverse impacts reported.

UNITED STATES: The contiguous United States (excluding Alaska and Hawaii) experienced its 28th-warmest, 13th-wettest September during the 110-year period of record, according to preliminary information provided by the NOAA National Climatic Data Center. Warmth was concentrated across the North-Central and Northeastern States; monthly temperatures were

among the ten highest September values on record in six states from Nebraska to New Jersey. Meanwhile, a ribbon of dry September weather stretched from the central Gulf Coast States northward into the Great Lakes region, resulting in the development of abnormal dryness (D0) and moderate drought (D1). By the end of September, moderate drought covered parts of eastern Wisconsin, Lower Michigan, and much of the Ozark Plateau in southern Missouri and northern Arkansas. Farther east, Hurricanes Frances, Ivan, and Jeanne heavily contributed to the wettest September on record in Georgia, West Virginia, and Pennsylvania, and near-record September wetness in many more Eastern States from Florida to southern New England. Meanwhile in the West, patchy precipitation locally boosted topsoil moisture but provided little or no relief from a multi-year, hydrological drought. The core Western drought area, consisting mostly of severe, extreme, and exceptional drought (D2, D3, and D4), continued to stretch from the Four Corners region and the Great Basin northeastward onto the northern half of the High Plains.

MEXICO: Although September precipitation averaged 114 percent of normal, according to the Servicio Meteorológico Nacional (SMN), most of the heavy rain was concentrated across the southern Plateau and in north-central Mexico. There were also occasional heavy showers scattered across northwestern Mexico, including the Baja Peninsula, in part due to the approach and passage of former eastern Pacific Hurricane Javier. Javier made landfall on the Baja Peninsula near San Ignacio as a tropical depression on September 19. Meanwhile, drier-than-normal conditions persisted in the Pacific and Gulf Coast regions of southern and eastern Mexico, adversely affecting some summer crops, including corn, during the grain-fill stage of development. For the summer rainy season to date (May-September), near- to above-normal precipitation across the southern Plateau and north-central Mexico contrasted with drier-than-normal conditions in much of southeastern Mexico. Nationally, May-September precipitation averaged 110 percent of normal.

During September, abnormal agricultural dryness (D0) expanded across southern and eastern Mexico, while pockets of moderate drought (D1) were introduced in the Pacific Coast States from Guerrero to Chiapas. Moderate drought also developed in several Gulf Coast States, including parts of Yucatan and Quintana Roo. Enough rain fell in most of northwestern Mexico to remove the designation of agricultural dryness or drought, although long-term precipitation deficits persisted.